IN THE CLAIMS:

1. (Previously presented) A paper processing roll, wherein the roll is configured to be exposed to an increased temperature during operation, wherein the roll has a surface which has been treated while hot prior to use of the roll, wherein the roll has a coating and the surface is comprised of the material of the coating, wherein the coating is comprised of a material selected from the group consisting of chromium, carbide, and oxide, wherein the roll is machined before and/or after coating at increased temperature.

2. (Original) The paper processing roll according to claim 1, wherein the roll has a hot-ground surface.

3. (Original) The paper processing roll according to claim 1, wherein the surface of the roll is treated at 50°C to 250°C.

4. (Canceled)

5. (Canceled)

6. (Previously presented) The paper processing roll according to claim 1, wherein the coating is comprised of

tungsten carbide or chromium oxide.

7. (Canceled)

8. (Previously presented) The paper processing roll according to claim 1, wherein the roll is ground.

9. (Original) The paper processing roll according to claim 1, wherein the roll is hot-balanced.

10. (Previously presented) A method for producing a roll for use in paper making, comprising the step of treating the surface of the roll while hot prior to use of the roll, wherein the step of treating the roll comprises hot-grinding the roll, further comprising the step of surface coating the roll after the step of hot-grinding the roll.

11. (Canceled)

12. (Original) The method according to claim 10, wherein the roll is treated at a temperature which corresponds substantially to a projected temperature of use.

13. (Canceled)

14. (Previously presented) A method for producing a roll for use in paper making, comprising the step of balancing the roll while hot, further comprising the step of treating the surface of the roll while hot.

15. (Canceled)

16. (Previously presented) A method for producing a roll for use in paper making, comprising the step of cooling the surface of the roll during manufacture of the roll at least over portions thereof for approximating the temperature conditions during operation in paper making, wherein the step of cooling comprises the step of contacting the surface area of the roll during manufacture of the roll with a cooling liquid.

17. (Original) The method according to claim 16, wherein the surface area being cooled corresponds to an area of the roll exposed to a paper web during operation.

18. (Canceled)

19. (Currently Amended) ~~The method according to claim 16~~ A method for producing a roll for use in paper making, comprising the step of cooling the surface of the roll during manufacture of the roll at least over portions thereof for approximating the temperature conditions during operation in paper making, wherein the step of cooling comprises the step of contacting the surface area of the roll during manufacture of the roll with a roll or band provided with a cooling cover.

20. (Currently Amended) ~~The method according to claim 16~~ A method for producing a roll for use in paper making, comprising the step of cooling the surface of the roll during manufacture of the roll at least over portions thereof for approximating the temperature conditions during operation in paper making, wherein the step of cooling comprises the step of contacting the surface area of the roll during manufacture with a cooling beam which is pressure-loaded against the roll.

21. (Currently Amended) ~~The method according to claim 16~~ A method for producing a roll for use in paper making, comprising the step of cooling the surface of the roll during manufacture of the roll at least over portions thereof for approximating the temperature conditions during operation in paper making, wherein the step of cooling comprises the step of blowing a gas or a

gas/fluid mixture against the surface area of the roll.

22. (Original) A method for producing a roll for use in paper making, comprising the steps of:

determining a hot profile of the roll while the roll is hot;

cooling down the roll;

subsequently cold grinding the roll to transfer the determined hot profile of the roll as a negative profile onto the roll.